STAHL POTTERY
(Powder Valley Pottery)
Upper Milford Township
Allentown vicinity
Lehigh County
Pennsylvania

HAER PA-124
PA-124

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
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STAHL POTTERY
(Powder Valley Pottery)

HAER No. PA-124

LOCATION:	Upper Milford Township, Allentown vicinity, Lehigh County, Pennsylvania
DATE OF CONSTRUCTION:	1932
SIGNIFICANCE STATEMENT:	The Stahl Pottery represents a relatively late development in the history of Pennsylvania redware. The Stahl's wood-burning kiln, with a capacity for firing 2,000 pieces of pottery, is a unique architectural and technological artifact on the American landscape. This fact, combined with the demise of lead glazes, makes the Stahl business the last traditional pottery of its kind. It represents a level of technology and combination of techniques impossible to replicate today.
HISTORIAN:	Report written and donated by Susan L. F. Isaacs, Folklife Specialist, 1987; edited by Justine Christianson, HAER Historian, 2007

INTRODUCTION

In 1847, Charles Ludwig Stahl opened the Powder Valley Pottery in Lehigh County. There, he produced redware, the red earthenware that played a significant role in the daily lives of Pennsylvanians since their first days of settlement in the seventeenth century. Redware was once used for every imaginable purpose in the home, on the farm, in the kitchen and in the barn. Furthermore, redware dishes decorated with slip trailing (lines of thinned clay) or sgraffito (incised designs) were used to commemorate births, baptisms, weddings and other events in the Pennsylvania German life cycle.

The Stahl pottery represents a relatively late development in the history of Pennsylvania redware. Redware production probably reached its peak around the time of the American Revolution, but prior to the arrival of railroad lines in Pennsylvania. The abundant earthenware clay resources of eastern Pennsylvania were conducive to redware production. Immigrants from the German Palatinate, Alsace Lorraine, Switzerland, other parts of central and eastern Europe, as well as Great Britain, brought earthenware traditions with them from their homelands. Pennsylvania's natural resources combined with the immigrant's skills led to the development of utilitarian and decorative redwares. These wares make up a major American material culture tradition of which the Stahls were an integral part.

After the death of the last Stahl potter, Russell, in the summer of 1986, the property, artifacts, and pottery were put up for sale in two public auctions held the summer of 1987. The pottery and surrounding property (over 4 acres) was appraised at approximately $150,000. Several historically minded individuals and organizations expressed interest in purchasing the site, but no one with sufficient concern was adequately endowed to meet the price. The first auction was scheduled on July 25 for the sale of pottery remaining at the site. The second auction was scheduled for August 29 for the sale of the remaining artifacts and property. There was no predicting the future of this invaluable site, imbued with the history and traditions of Pennsylvania. The auctions promised to scatter artifacts in every direction, and the future of the workshop, kiln and property hung in limbo. This report is the result of public concern for "salvage" ethnographic and architectural investigation. Working under contract with the Pennsylvania Heritage Affairs Commission, the author conducted six days of research and writing to prepare last-minute documentation of the site. At the same time, the staff of the Pennsylvania Historical and Museum Commission's Bureau of Historic Preservation took measurements of the buildings on site.

REDWARE

Demands for redware in the eighteenth and nineteenth centuries were high, in part because earthenware is a fragile medium. Once train lines reached Pennsylvania, sturdier stoneware clays were shipped in from New Jersey and Maryland. Stoneware provided stronger storage vessels than redware, and though not as highly valued for baking it offered yet another major advantage: it could easily be sealed with a non-toxic glaze.

Even after firing, all clay is porous, so the majority of daily uses require some type of glaze sealant. Lead was always a major component of earthenware glazes. Though cheap and readily available, toxicity is its one unfortunate drawback. In the nineteenth century, its poisonous properties were known by many, but overlooked by most. Pickling was a method of preservation popular among Pennsylvania Germans and their fellow early Americans, but the acid of the vinegar used to prepare such dishes eats persistently away at lead glazes. Acidic foods preserved in lead glazed containers, therefore, presented particularly deleterious effects on the bodies, and eventually the minds, of consumers.

Why then, did potters continue to make lead glazed earthenware and consumers continue to seek it? The issue is analogous to health issues today, for while consumers are aware that many manufactured products are dangerous, they remain on the market. Potters handled lead and breathed its fumes during glazing and firing. The Stahls knew the hazards of their work; in fact, an article on lead poisoning is among their papers in the Schwenkfelder Library. The practical and aesthetic properties of lead must have outweighed its perceived dangers for potters and their customers. Indeed lead use was not restricted by the U.S. Food and Drug Administration (FDA) until 1971. The FDA legislation represented an important step in consumer protection, but it effectively curtailed a mode of rich decoration characteristic of Pennsylvania German pottery style.

The development of metal and glass containers represented technological advancements beyond all forms of pottery. Once they became widely available as a result of the Industrial Revolution, both stoneware and redware began to disappear. Thus it is noteworthy that the Powder Valley Pottery survived for forty-eight years, closing in 1896, and that it reopened in 1932, long after redware was in common household use.

THE STAHL'S KILN

The Stahls' wood burning kiln, with a capacity for firing 2,000 pieces of pottery, is a unique architectural and technological artifact on the American landscape.[1] Built in 1932, the kiln is based on a much earlier style derived from Europe. Similar kilns existed in Pennsylvania into the twentieth century. One was at William Schofield's redware pottery in Honey Brook, Chester County, Pennsylvania, while another was at Charles Hyssong's stoneware pottery in Bloomsburg, Columbia County. The latter was razed for its firebricks after a 1945 sale.[2] The Stahls also probably had a very similar kiln at the original pottery site nearby in Powder Valley.

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[1] Russell Stahl eventually purchased an electric kiln from Lester Breininger. However, Dennis Stahl reported that Russell found the electric firing extremely unsatisfactory in comparison to the results of his wood burning kiln.
[2] Arthur E. James, *The Potters and Potteries of Chester County, Pennsylvania* (Exton, PA: Schiffer Publishing Company, 1978), 149-53; Jeanette Lasansky, *Made of Mud: Stoneware Potteries in Central Pennsylvania, 1831-1929* (University Park, PA: Pennsylvania State University Press, 1979), 9.

The Stahl kiln at Powder Valley is a round updraft wood burning kiln. It is similar to several types depicted in Daniel Rhodes' *Kilns: Design, Construction and Operation.* Relevant illustrations in Rhodes' work include the European updraft kiln, the bottle kiln, the hovel kiln, and the round downdraft kiln. Although Rhodes depicts coal burning kilns, it is nonetheless valuable to examine their parallels to the Stahl structure, which was most akin to the hovel kiln. The Stahls probably used wood as the cheapest and most readily available fuel in their immediate region. The hovel kiln has a chimney constructed around the main part of the kiln, but not resting on it. Although this is absent in the Stahl kiln, the general principle of pulling heat from the bottom of the kiln out through the top (the updraft) is unchanged. Kilns may also be constructed with a downdraft or a crossdraft. Rhodes notes that "Round updraft kilns were substantially built, with walls 18 inches thick or more…For earthenware the kilns were constructed of a good grade of red or buff brick, and no insulation was used. Door or 'wickets' were bricked in each time." This model is similar to the Powder Valley kiln.[3]

A look at the European updraft kiln is also insightful with its large cone-shaped chimney built over the top. The chimney creates a stronger draft, making for higher temperatures and increased efficiency. The Stahl kiln has four fireboxes; Rhodes depicts a kiln with three. While these details differ from the Powder Valley kiln, the general principle of airflow is the same. During firing, flames travel upwards from the fireplace and through the holes in the crown.

THE STAHL FAMILY

Redware was already past its peak demand when Charles Ludwig Stahl opened the Powder Valley pottery in 1847, but the family wares were in high demand until 1880. According to Russell's descriptions (recalled by his nephew Dennis), Charles' original Powder Valley Pottery had up to twenty assistants at a time. Some of them were itinerant Irish potters, who reportedly did production pottery. When the day was over, they might make a fancy ring vase, and, indeed, a damaged ring vase was found in the workshop attic. The Stahls called these Irish ring vases.[4]

The Stahls fired no pots from 1896 through 1931 while Charles' sons Thomas and Isaac pursued other careers. Isaac, for example, was a talented musician. He conducted the Bally, Pennsylvania band and gave music lessons throughout the region, activities he continued throughout his potting career. Only when he discovered that his family's wares, priced originally at a few pennies each, were reselling on the antiques market for several dollars, was his own enthusiasm for pottery rekindled. In 1931, Isaac reopened the pottery with his brother Thomas at a new site in Powder Valley (the current location). In interviews with family members, Isaac emerged clearly as the creative force behind Stahl pottery in the twentieth century. Apparently, Thomas did most of the production pottery (i.e., the uniform, utilitarian pieces) and stayed out of

[3] Daniel Rhodes, *Kilns, Design, Construction and Operation* (Radnor, PA: Chilton, 1968), 43.
[4] Albert George Stahl, "Hogmanay Bottle," *The Pennsylvania Dutchman* 5, no. 15 (1954): 8-9.

the family altercations. Isaac not only mastered production but also made decorative wares, kept the books, met with customers, handled public relations and wrote all the correspondence.[5]

The three other sons of Charles Ludwig Stahl chose not to be involved in the family business. James, older than Isaac and Thomas, was also trained as a potter. He assisted Isaac with the masonry on the kiln, and Thomas assisted with constructing the workshop.

According to family members Dorothy Stahl Leh and Frances Stahl, Isaac was a kind-hearted but hard taskmaster. Both worked at the pottery as children in the 1930s. They had a close relationship with their "Pappy," grandfather Isaac. While Isaac entertained visitors to the pottery by demonstrating and visiting with them, Thomas turned wares on the wheel and kept to himself. Frances and Dorothy helped wrap packages and assisted customers to their cars, occasionally receiving a 5 or 10 cent tip. Sometimes Isaac gave them potting instructions. Any wares not turned to perfection were instantly smashed. "Start all over again," he would say. Dorothy, who studied piano with Isaac, explained that he was equally demanding as a musician. Regarding both music and pottery, he said "It's in you, but try and get it out of you!" When she made a mistake at piano lessons, Isaac slapped her fingers.

Dorothy and Frances also watched their Uncle Russell under the strict tutelage of Isaac, his father. Russell had worked at the Great American Woolen Mill in the 1930s, but when he returned from service in World War II, he was officially apprenticed to Isaac.[6] As master, Isaac spared no words with his son. When Russell's pots came off the wheel, they were lined up on the board to dry. If any one of the pots varied in the least from the others, the entire board was dumped in the clay pile or on the floor, while Russell was set to begin again. After Thomas' death in 1942 and Isaac's in 1950, Russell took over the family business. He operated the business independently, and the last firing of the Stahl kiln took place in 1956.[7]

Russell possessed much, if not all, the knowledge of the Stahl pottery, although Isaac had made notes about clays and glazes for his benefit. No one seems to know exactly why he abandoned pottery for the hotel business. The 1950s were not an era when handmade objects were in great demand, so Russell Stahl may not have wanted to continue with an "old-fashioned" pottery at a time when Americans were far more fascinated with technological advances and manufactured goods. The more recent prosperity of the American middle class and a rekindled admiration for handmade crafts were yet to come.

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[5] This is corroborated by papers at the Schwenkfelder Library. Time limitations did not allow for the interview of descendents of Thomas Stahl.

[6] This is documented in the Schwenkfelder collection.

[7] Slightly earlier dates have been published. However, when the author examined the plugs inserted into the kiln peepholes, they were found to be sheathed in charred newspaper. This indicated that the paper was wrapped around them during the firing. One of these newspaper scraps bore a 1956 date. Stahl family members agree this is accurate.

After closing down the pottery, Russell owned and operated the Fredericksville Hotel for roughly two decades. Apparently he had a wheel at the hotel and sometimes demonstrated for customers. When the hotel was auctioned in 1980, much of the pottery went with it. After retiring from the hotel business, Russell lived a hermit-like existence in the Powder Valley workshop and a small cabin adjacent to the pottery. In 1976, like craftspersons throughout the country, Russell was inspired by the American Bicentennial to revive his family's redware tradition. Property caretaker Randy Tyson helped construct an addition to the workshop where Russell began offering pottery classes for $15/hour. Among his students were sgraffito artist Barbara Breininger and his nephew, Dennis Stahl.

Russell proved as demanding an instructor as his father Isaac had been. In 1976, he offered lessons three times a week, but six months was the full extent of his teaching career. Students were not permitted to sign their own work; they could only write "Stahl" and the year on the bottom of their pieces. After the classes ended, Dennis worked intermittently with his uncle for three years, hoping to learn the trade and take over the business. Apparently, Russell was frustrated with his own dulled potting skills, and like his father, he expected perfection. Wares flawed in any way were destroyed. Russell also suffered from poor health. According to family members, he had contracted malaria while fighting in World War II, and was prone to bouts of illness as a result throughout his life. Later he suffered from Alzheimer's disease and diabetes. He became possessed with evangelical fervor and had visions of the devil.

Despite offering classes, Russell never really revived the business, however, and this along with his persistent shunning of the public may have protected this important historical site. On the other hand, Russell's attitude kept potential students from carrying on the redware tradition (including his well-intentioned and dedicated nephew Dennis). When Russell Stahl died in 1986, he carried a wealth of knowledge and traditions with him to the grave.

Many have said that Russell Stahl was the last redware folk potter. Yet a survey of publications on the Stahls over the last fifty years indicates that Isaac and Thomas were also viewed as the last of the "true redware folk potters." The definition of folk craft and analysis of demand are dependent on a range of factors involving utility, aesthetics, technology, perception, economics and more. These factors are too complex for full treatment here. Simply stated, the perception of "folkness" is dependent less upon the craftsworker—in this case, the potter—than upon the audience or perceiver. Few, if any potters, have defined themselves as "folk craftsworkers" or "folk artists." These are terms applied by outsiders. Therefore, the descriptor, "folk," is not ethnographically germane, unless one is studying the consumer/audience/outsider rather than the craftsworker.

Russell was the last Stahl potter with a thorough understanding of this extraordinary site with its wood burning kiln, treadle wheel for turning pots, pug and clay mills, countless clay and glaze recipes, and thousands of artifacts. Russell's own nephew Dennis sought to apprentice with him, but Russell was reluctant to pass his knowledge along to anyone.

Art historian Edwin Atlee Barber helped reinvigorate new interest in pottery. In 1903, Barber published his *Tulip Ware of the Pennsylvania-German Potters*, which remains a classic work on redware to this day. Barber introduced Pennsylvania pottery to the art world, creating a new audience for it among collectors and artists. Barber's writing stimulated the redware market. Throughout the twentieth century, redware became increasingly valued for its aesthetic properties. As utilitarian demands for redware waned, collecting demands grew.

STAHL PAPERS AT THE SCHWENKFELDER LIBRARY

Prior to the 1987 auction, Dennis Stahl was instrumental in donating papers collected at the pottery to the Schwenkfelder Library in Pennsburg. The value of this collection cannot be overestimated, as written records from any pottery are rare. Traditional potters are not known as writers, and they zealously guard their secrets. When the hands are covered with clay, potters rarely pick up a pencil to take notes. Isaac Stahl, who reportedly kept the journal, may have been a rare exception to this rule. The Stahl papers include notebooks of glaze and clay recipes. Articles and correspondence indicate that Isaac frequently searched for new or different glazes. Wares damaged in firings were stored in Isaac's attic above the workshop, with notes written on the back or underside, or attached to them. At one time, the glaze recipes corresponded to Isaac's samples. Unfortunately, one of the consequences of the 1987 auctions was the diaspora of these samples and their separation from the notes. Dorothy and Frances emphasized that Isaac would never sell a "second," that is, an imperfect pot. He preferred to keep them for his own research. But beyond this aesthetic consideration, these were valuable records that told the story of the successes and failures in the kiln.

The papers also include the guest registers kept at the pottery, which listed visitors from all over the world dating back to 1901.[8] It has often been noted that the Stahls had international visitors. Francis and Dennis Stahl own a pot made in Powder Valley by the British ceramics scholar Bernard Leach. But equally as significant as the international guests, the log books indicate the degree to which the Stahls were an integral part of their Pennsylvania German world. The registers are signed, occasionally in Pennsylvania German dialect, by fellow craftsmen (Paul Wieand), authors (Guy Reinert), clergymen (Thomas Brendle, Sumneytown Union Church), and local scholars (H.W. Kriebel, Schwenkfelder Library).

Dorothy, Frances, and Dennis noted in interviews that the Stahls dug clay in a number of locations. The Stahl papers include a number of articles and advertisements from clay companies. This suggests that some commercial clays may have been used together with local ones. It should also be noted that while glazes were mixed at the pottery, they were made from commercial elements. Perhaps local slips were used in Charles Ludwig Stahl's original pottery, but documents have not been found to support this one way or another. Furthermore, while red

[8] The 1901 log book presents a discrepancy. According to Isaac Stahl's own article on "Pennsylvania German Pottery" (1941), the family stopped making pottery in 1896 and did not reopen for business until 1932. Was pottery fired in 1896 sold for five years afterwards? It is difficult to imagine the Stahls had that much overflow inventory.

earthenware clay was always abundant in Pennsylvania, slips were not. Slips were imported from New Jersey as early as the eighteenth century.

CONCLUSION

The Stahls ultimately produced pottery at three sites. The most recent has been discussed in this report. The original 1847 site is nearby in Powder Valley. In addition, Isaac Stahl made pottery at his home in Bally, Berks County. The Stahl family purchased the Allentown property and obtained roughly one-third of the tools at auction in 1987 under the Stahl Pottery Preservation Society, Inc. Significant collections are also held by two potters and the Lehigh County Historical Society as of the writing of this report.

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